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S O I L C O N S E R V A T I O N L I T E R A T U R E
S E L E C T E D C U R R E N T R E F E R E N C E S

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"Let us never forget that the cultivation of the earth is the most important labor of man. Unstable is the future of that country which has lost its taste for agriculture. If there is one lesson in history which is unmistakable it is that national strength lies very near the soil." - Daniel Webster.

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Mildred Benton
Librarian

PERIODICAL ARTICLES

Black Locust

- Meginnis, H.G. Effect of top pruning on survival and early growth of black locust. Jour. Forestry 38(1):30-36, tables. January 1940.
"Literature cited," p.36.

Capillarity

- Agapov, A.P. A field apparatus for the determination of capillary pressure in foundation soils and in soils. Leningrad Akad. Selsk. Khoz. Nauk. Dok. Lenina no. 11. pp. 46-48, illus. 1939.
Article in Russian.

"The apparatus consists of a short Chamberland candle connected to a mercury manometer. An equation for calculating the effective radius of the capillary pores is given." Imp. Bur. Soil Sci. Soils and Fert. 3(1):15. 1940.

County Planning

- Allin, B.W. County planning project—A cooperative approach to agricultural planning. Jour. Farm Econ. 22(1):292-316. February 1940.
- Foster, Ellery and Dunkley, L.J. County planning under way. U.S. Bur. Agr. Econ. Agr. Situation 24(1):14-15. January 1940.

"A new program of comprehensive planning for agriculture through State, county, and community committees of farmers and of trained agriculturists was started about a year ago as the result of a joint agreement between the Land-Grant Colleges and the United States Department of Agriculture.

"The purpose of the planning program is to coordinate the numerous action programs in agriculture, to fit them to local conditions and to formulate more effective programs, and to do all this through thoroughly democratic procedures whereby farmers, experts, and administrators working together reach agreements on desirable local adjustments and measures of action."

Some of the concrete results which have already come to the attention of the Department are given.

- Hadley, N.S. 78 farmers make a map. U.S. Bur. Agr. Econ. Land Policy Rev. 3(1):15-21, map. January-February 1940.

Includes a corrected, combined map of Parke county, Ind., the product of 78 farmers and farm workers who "wanted to see where they were going" and who completed this step in county planning with a deeper understanding of their agricultural problems.

Dams

Douma, J.H. Model study of Green Mountain dam spillway. Civ.Engin. 10(3):153-156, illus., figs. March 1940.

"Green Mountain Dam, now under construction, is a unit of the Colorado-Big Thompson Project, Colo. Design of its spillway presented a number of interesting hydraulic problems that were solved largely by the model study reported here. Among those discussed in particular detail by Mr. Douma are the minimum permissible curvature of the inlet transition, the discharge characteristics of the crest, the design of the chute, and the feasibility of a stilling basin to prevent scour below the dam."

Johnson, F.M.S. The effect of Shasta Dam on navigation and flood control. U.S. Bur. Reclam. Reclam. Era 30(2):38-41, illus., figs. February 1940.

Johnson, F.M.S. The effect of Shasta Dam on the Sacramento River with special reference to navigation and flood control. Civ. Engin. 10(2): 108-110, figs. February 1940.

Symposium on county planning. Planning Forum (Mass. state planning board Worcester county issue) 3(4):1-36. October-November 1939.

Abstracts or summaries of addresses delivered at 26th Annual Planning Conference sponsored by the Massachusetts Federation of Planning Boards at Worcester, October 20, 1939.

Partial contents: Land use planning in rural areas of Worcester county, by David Rozman: pp. 4-6; Water resources problems of Worcester county, by Draveaux Bender: pp. 9-11, map; Conservation in Worcester county, by R. J. Kenney: pp. 26-28, 36; The Worcester county land-use planning project, by J. D. Black: pp. 29-33; The town forests in Massachusetts, by H. A. Reynolds: pp. 34-36.

Dry-farming

Zink, N.E. Dry-farming regions in Utah. Econ. Geog. 15(4):421-431, figs., table. October 1939.

Dust

Blue, J.A. Dust - its effect on man from a medical standpoint with special reference to the dust bowl. South. Med. Jour. 31(10):1101-1106, fig. October 1938.

"References," p. 1106.

Evaporation

Koliasev, F.E. Measurement of the true amount of evaporation from the soil. II. Leningrad Akad. Selsk. Khoz. Nauk Dok. no. 15, pp. 31-35. 1939. Article in Russian.

Development of a method of measuring hygroscopicity by means of a horizontal hair hygrometer. Equations are given for relating the hygroscopicity to evaporation. Imp. Bur. Soil Sci. Soils and Fert. 3(1):15. 1940.

Ramdas, L.A. and Mallik, A.K. Loss of water by evaporation from the upper surfaces of soil columns resting on a water table. Current Sci., India, 8(6):264-266. June 1939.

"Data for black cotton Poona soil, normal alluvial Punjab soil, and 'bari' (alkali) soil from the Punjab are recorded and discussed." Imp. Bur. Soil Sci. Soils and Fert. 3(1):17. 1940.

Smolik, Ladislav. Evaporation in the atmosphere adjacent to the soil K výparu v přizemní vrstvě vzduchu. Českoslov. Akad. Zeměděl. Sborn. 13(3):286-293, pl., figs. 1938.

"The evaporimeters devised by Piche, Wild, Mitscherlich, Livingston, Bates et al. were compared. Mitscherlich's proved the best for the author's work, and using them, evaporation was detd. during the summer of 1935 in the atmosphere over grass land, at 10, 50 and 200 cm. above ground. Evaporation was lowest in the atmosphere adjacent to the grass or to the soil surface covered with rye, and it increased with the altitude up to 200 cm. During the night the evaporation at all heights used was much less than during the day; over grass in the lowest air layers the night evaporation was 1/7 that of the day. After harvest, the evaporation in the atmosphere, especially over the soil surface, increased abruptly. When heavy dew was forming the evaporation in the atmosphere adjacent to the soil decreased considerably. - J. Herzig." Abs. Biol. Abs. 14(1):151. January 1940.

Floods and Flood Control

Boughton, V.T. Flood-control progress. Engin. News-Rec. 124(7):69-72, illus., map. Feb. 15, 1940.

Map of "major flood control projects under way in the United States", p. 70.

Flood-control methods; their physical and economic limitations. Progress report of committee of the Hydraulics division on flood control A.S.C.E. Amer. Soc. Civ. Engin. Proc. 66(2):265-282. February 1940. Charles B. Burdick, Chairman.

Follini, Luigi. Torrent control in the high mountain basin of the Tidone forest (La sistemazione dell'alto bacino montano del torrente "Tidone". Riv. Forest. Ital. 1(6):51-57, illus. August 1939. Article in Italian.

Houk, I.E. Transient flood peaks. Amer. Soc. Civ. Engin. Proc. 66(1):176-178. January 1940.

Discussion of paper by Henry B. Lynch, published in November, 1939, Proceedings.

Mackaye, Benton. Region building in river valleys. Upstream community vs. downstream slum. Survey Graphic 29(2):107-108, illus. February 1940.

Contents that the big job to be done upstream in a flood control program "is to practice scientific forest using and scientific grass and soil using, cease ruining the soil and by crop rotation and contour planting, practice treatment of the land to heal its scars and restore its coverage in other words, practice land hygiene."

Moseley, E.L. Long time forecasts of Ohio river floods. Ohio Jour. Sci. 39(4):220-231, plate. July 1939.

Sanial, A.D. and Matson, N.A. Epochal flood frequency and intensity in the river district of La Crosse, Wisconsin. Amer. Met. Soc. Bul. 21(1): 12-17, figs., tables. January 1940.

Forests and Forestry

Chapman, A.G. Problems in forestation research. Jour. Forestry 38(2): 176-182. February 1940.

Craddock, G.W. Forestry and water. Jour. Forestry 38(2):141-146. February 1940.

Gemmer, E.W., Maki, T.E., and Chapman, R.A. Ecological aspects of long-leaf pine regeneration in south Mississippi. Ecology 21(1):75-86, figs., tables. January 1940.
"Literature cited," p. 86.

Lunt, H.A. Soil characteristics, topography, and lesser vegetation in relation to site quality of second-growth oak stands in Connecticut. Jour. Agr. Res. 59(6):407-428, tables. Sept. 15, 1939.
"Literature cited," pp. 427-428.

Miller, Fred, jr. Fence row forests. Rural New Yorker 99(5468): 3, 6, illus. Jan. 13, 1940.

The author calls attention to an "approach to tree planting and small area 'forest' maintenance which goes under the euphonious name of 'fence row forestry'".

He contends that it "holds out distinct benefits to those farmers who will make the try".

Wallace, H.A. The forest in our land economy. Amer. Forests 46(3): 103-105, 126, 142, illus.

From statement made before Joint Congressional Committee on Forestry.

Wilde, S.A. Classification of gley soils for the purpose of forest management and reforestation. Ecology 21(1):34-44, figs., tables. January 1940.

"Literature cited," p. 44.

Highway Erosion Control

Controlling erosion with creosoted-timber ditch checks. Better Roads 9(11):29-30. November 1939.

"Design of two forms of treated timber ditch checks for roadside drainage."

McManmon, J.V. Erosion control job reduces maintenance, Project near Oxford, Mass., included installation of drainage system, resloping and planting on slopes. Contractors and Engin. Monthly 37(1):46, 54. January 1940.

Hydraulics and Hydrology

Mason, M.A. and Stevens, J.C. Relation of the statistical theory of turbulence to hydraulics. Amer. Soc. Civ. Engin. Proc. 66(2):352-356. February 1940.

Discussion of paper by A.A. Kalinske published in October 1939 issue.

Sherman, L.K. and Kazmann, R.G. The unit hydrograph principle applied to small water-sheds. Amer. Soc. Civ. Engin. Proc. 66(2):317-320, table. February 1940.

Discussion of paper by E.F. Brater published in September 1939 issue.

Sixth annual report of Special committee on hydraulic research, as prepared for the 1940 annual meeting of the society, American society of civil engineers; Civ. Engin. 10(3):135-187, figs. March 1940.

J.C. Stevens, Chairman.

"The purposes of this committee are: (1) to prepare a manual of laboratory practice, including a standard set of letter symbols for hydraulic model work; (2) to sponsor fundamental research projects, emphasizing the physical phenomena involved in certain hydraulic problems; (3) to gather data regarding the conformity of model to prototype behavior; (4) to prepare abstracts of foreign papers dealing with pertinent hydraulic research; and (5) to encourage the preparation of papers on subjects within the purview of the committee's activities. Reports of previous activities have been published in 'Civil Engineering' as follows: Vol. 7, No. 3, March 1937, p. 195; Vol. 8, No. 3, March 1938, pp. 194-196; and Vol. 9, No. 2, February 1939, pp. 109-110."

Snyder, F.F. The unit hydrograph principle applied to small water-sheds. Amer. Soc. Civ. Engin. Proc. 66(1):150-152, table. January 1940.

Discussion of paper by E.F. Brater, published in September 1939 issue.

Infiltration

Musgrave, G.W. Notes on recent developments in the infiltration problem. Soil Conserv. 5(9):232-235, figs. March 1940.

Irrigation and Drainage

Kelley, W.P., Brown, S.M., and Liebig, G.F., jr. Chemical effects of saline irrigation water on soils. Soil Sci. 49(2):95-107, tables. February 1940.

"References," p. 107.

Khanna, R.K. When ignorance is not bliss. Indian Engin. 106(5):156-157. November 1939.

The author expounds his theories on the importance of a knowledge of hydraulic science in connection with successful irrigation engineering. He mentions the problem of silting channels, in particular.

Reiss, L. A. Essai de détermination des quantités d'eau nécessaires aux champs cultivés en se basant sur les données météorologiques. (Determination of irrigation water for crops on the basis of meteorological data.) Ann. Agron., Paris, 9(6):810-816, diags. November-December 1939.

Article in French.

"Bibliographie," p. 816

Sutton, J. G. Our drainage problems. Soil Conserv. 5(7):179-182, 194, tables, map. January 1940.

West, E. S. and Howard, A. Spray irrigation. Empire Jour. Expt. Agr. 7(28): 311-319, illus., table, figs. October 1939.

"A system of spray or sprinkler irrigation used on the Murrumbidgee Irrigation Areas, New South Wales, Australia, is described, and the hydraulic principles involved on water being discharged from a long perforated pipe are discussed, and their application is indicated."

Wilson, J. D. Evaporation index-meter for use in irrigation practice. Ohio Agr. Expt. Sta. Bim. Bul. 35(202):3-6. January-February 1940.

Land Management and Utilization

Clayton, C. F. Land utilization and the national welfare. Soil Conserv. 5(8):201-204. February 1940.

Fuller, N. G. The land purchase and development program in Baca County, Colo. Soil Conserv. 5(8):213-215, illus. February 1940.

Outlines "the steady, purposeful campaign" to overcome the fundamental problems of blowing sand.

Grest, F. G. Management of lands held under title III of the Bankhead-Jones farm tenant act. Soil Conserv. 5(8):204-206, 215, 220. February 1940.

Johnson, M. B. Land-use adjustment in North Dakota. Soil Conserv. 5(9):221-222, 226, illus. March 1940.

"One of the best examples of land-use adjustment in North Dakota is in the western part of the State, within the Little Missouri land-use adjustment project in McKenzie County."

Jones, J. P. Land-use adjustments in southern New York. Soil Conserv. 5(8):219-220, illus. February 1940.

Kimmel, R. I. Unit reorganization program for the Southern Great Plains. Jour. Farm Econ. 22(1):264-269. February 1940.

The object of the Unit Reorganization program is to assist resident farmers to lease abandoned land in order that it can be put to the use for which it is best adapted, grazing. A major shift in emphasis from wheat to livestock is noticeable.

McCall, H.R. and associates. Land utilization development. Soil Conserv. 5(7):170-174, illus. January 1940.

Traces the development of the submarginal land program in the U.S. Dept. of Agriculture from the inception in December 1935 under the Resettlement Administration to the present time.

Sanders, M.H. Five years after land utilization came to Brown County, Ind. Soil Conserv. 5(8):216-218, illus. February 1940.

Smith, Russell. For the preservation of the land. South. Rev. 5(3): 524-539. Winter, 1940.

The author advocates a program for public purchase of land designed deliberately to accomplish needed changes in southern economy.

Wernimont, Kenneth. State rural land use legislation in 1939. Jour. Land and Pub. Util. Econ. 16(1):110-116. February 1940.

This is a less detailed summary than is U.S. Bureau of Agricultural Economics, Land Economics Division Bulletin 51 entitled: "Summary of outstanding laws affecting rural land use enacted during 1939", issued January 1940.

Legumes

Cates, J.S. We have been sending a boy. Country Gent. 60(2):21, 71-72, illus. February 1940.

Tells of newly perfected technique in the use of kudzu and Lespedeza sericea in the Piedmont South as demonstrated to the writer during a tour under the guidance of R.Y. Bailey, Region 2 agronomist, S.C.S.

Leger, J.E. Lespedeza solved his problem. Prog. Farmer (Ga.-Ala.-Fla. Ed.) 55(3):16, illus. March 1940.

An Early county, Georgia farmer demonstrates that small grain followed with lespedeza will produce economical pasture on stiff soils or land with a clay subsoil.

Oliver, A.M. Northward Korean. Capper's Farmer 51(2):7, illus. February 1940.

Two Crawford county, Illinois farmers tell of their methods of moving Korean gradually northward. They believe that "demand for an earlier maturing lespedeza that will be adapted to the upper Corn Belt may eventually be supplied by Korean".

Weiss, Freeman. A key to the typical viruses of leguminous crops. U.S. Dept. Agr. Bur. Plant Indus. Plant Dis. Reporter 23(22):352-361. Dec. 1, 1939.

"Literature cited," pp. 360-361.

Wilson, J.K. Symbiotic promiscuity of two species of Crotalaria. Amer. Soc. Agron. Jour. 31(11):934-939, table. November 1939.

"Literature cited," p. 939.

Lysimeter Studies

Joffe, J.S. and Mclean, H.C. Lysimeter studies. The movement of anions through the soil profile of a gray-brown podzolic soil. Com. Fert. 59(4):36. October 1939.

Brief summary of paper given before Division of fertilizer chemistry, American chemical society, Boston, Mass., Sept. 11-15, 1939.

Meetings

Brooks, C.F. The Columbus meeting, Dec. 27-28, 1939 of the American meteorological society; Amer. Met. Soc. Bul. 21(1):22-24. January 1940.

Reviews paper by R.T. Zoch entitled: "The floods in the Slauch River at Chappells, S.C., in September and October, 1929" and by C.W. Thornthwaite and B. Holzman entitled: "The determination of atmospheric moisture for use in evaporation."

Program of the Columbus meeting with abstracts of papers. Twenty-fifth annual meeting of the Ecological Society with the American Association for the Advancement of Science, Entomological Society of America, Limnological Society of America, Wednesday, December 27, 1939 to Saturday, December 30, 1939. Ecol. Soc. Amer. Bul. 20(4):26-41. December 1939.

Partial contents of abstracts: The response of the plum grown under hill culture conditions to modifications in cultural treatment, by J.M. Aikman and H.E. Brewer, pp. 26-27; Root studies in secondary succession stages on eroded soils, by R.M. Warner, p. 27; The relation of geography to human ecology, by C.W. Thornthwaite, p. 30; Deterioration of midwestern ranges, by J.E. Weaver and F.W. Albertson, p. 32; Deterioration of grassland from stability to denudation with decrease in soil moisture, by J.E. Weaver and F.W. Albertson, pp. 32-33; The effect of aspect of slope on climatic factors, by J.M. Aikman, p. 35; Atmospheric moisture in relation to ecological problems, by C.W. Thornthwaite, p. 35; Changes in grassland vegetation in western North Dakota 1932 through 1939, by Warren Whitman, H.C. Hason and Roald Peterson, p. 40; Unrecognized initial stage of plant succession and its prominence in soil erosion control in the South-Central United States, by W.E. Booth, p. 41.

Population Readjustment

Lantz, H.L. Readjustment of population to land resources in northern Montana. Soil Conserv. 5(8):210-213, illus. February 1940.

Rainfall

Austin, J.M. Comparison of rain-gauges at Apia. New Zeal. Jour. Sci. and Technol. 21(1B.):52-56, figs., tables. July 1939.

"References," p. 56.

"The results of an investigation into the catches of the tree non-recording rain-gauges are given. An attempt has been made to explain the differences in catch by a consideration of such factors as evaporation, sheltering, splashing, height of gauge, etc."

Borst, H.L., Woodburn, Russell, and Bayer, L.D. Frequency and seasonal distribution of erosive rains in Ohio. Ohio Agr. Expt. Sta. Bmo. Bul. 35(202):15-21. January-February 1940.

Elgar, W.H. Distribution of rainfall within limited area. Surveyor 96(2479):93-96. Jly. 28, 1939.

"Theoretical study of effect of rainfall on flow in sewerage and drainage systems; types of rainfall; relation between distance and area covered by rain storms; variations in total fall; shape of storms; variation of intensity in relation to duration. Before Instn. Mun. & County Engrs." Civ. Engin 10(2):20. February 1940.

Hughes, H. Rainfall intensities at Melbourne, Victoria. Inst. Engin. Austral. Jour. 11(9):321-329. September 1939.

Results of exhaustive investigation into intensities of falls of rain of various durations, from five minutes to five days, which have occurred in Melbourne, Victoria, during past 62 years; operation of recording rain gages and interpretation of their charts; suggested design curves; comparison of suggested curves with actual curves; floods of 1849 and 1863; distribution of storms.

Thompson, G.T. Investigation of rainfall and runoff. Factors affecting runoff... erosion and siltation data collected at the Coliban River catchment, Vic. Commonwealth Engin. 27(5):170-172, graph. Dec. 1, 1939.

Thornthwaite, C.W. Atmospheric moisture in relation to ecological problems. Ecology 21(1):17-28, figs. January 1940.

"Literature cited," pp. 27-28.

Range and Pasture Management

Collins, H.H. jr. The tragedy of the San Simon. Nature Mag. 33(2):107-111, illus. February 1940.

In the San Simon Valley "a handful of cattlemen and sheepmen have irreparably ruined counties as large as whole Eastern states within the memory of men who are not yet old. In the San Simon Valley fewer persons in a shorter time imposed on a vaster area greater destruction than the United States had as yet seen. The four horse-men of this Arizona apocalypse were over-grazing and drought, a ditch and a flood."

Connaughton, C.A. Range and watershed problems. Jour. Forestry 38(2):164-171. February 1940.

Daubenmire, R.F. Plant succession due to overgrazing in the Agropyron bunchgrass prairie of southeastern Washington. Ecology 21(1):55-64, figs., tables. January 1940.

"Literature cited," p. 64.

Harper, F.B. Rehabilitation of Oregon range. Soil Conserv. 5(9):227, 231. March 1940.

Run-off

Escritt, L.B. Accuracy of runoff calculations. Surveyor 96(2480): 119-121. Aug. 4, 1939; 96(2481):170. Aug. 11, 1939.

Theoretical discussion of equations for intensity of rainfall and total rainfall; direct calculation diagrams; limitation of areas covered by storms; use of flow recorders; effect of surcharge; effects of storage.

Krimgold, D.B., Weber, J.L., and Minshall, N.E. Some preliminary results from run-off studies on demonstration projects. Soil Conserv. 5(7): 186-190, 194, figs., table. January 1940.

Letkovsky, A.I. The freezing of soils and its influence on the run-off of the surface waters in spring (Promerzaemost' pochv i eyo vliianie na vesennii stok poverkhnostnykh vod.) Lesnoe Khoziaistvo 3:75-80, tables. 1939.

Article in Russian.

Reinhold, F. Grundsatzliches ueber den Abflussbeiwert. Gesundheits-Ingenieur. 62(21):294-299. May 27, 1939.

"Theoretical mathematical analysis of factors affecting intensities of runoff taking into account experimental study by author; comparison of American and European runoff formulas." Civ. Engin. 10(2):20. February 1940.

Sherman, L.K. The hydraulics of surface runoff. A test of some common assumptions of applied hydrology. Civ. Engin. 10(3):165-166, figs. March 1940.

The author, in two pages, gives the gist of a much longer paper on file in the Engineering Societies library, New York.

Zingg, A.W. Degree and length of land slope as it affects soil loss in runoff. Agr. Engin. 21(2):59-64, figs., tables. February 1940.

"Literature cited," p. 64.

Rural Zoning

Menhinick, H.K. County zoning by indirection. Jour. Land and Pub. Util. Econ. 15(4):482-483. November 1939.

Refers to conditions in Tennessee.

Musbach, W.F. and Williams, M.C. Rural zoning in Minnesota. Jour. Land and Pub. Util. Econ. 16(1):105-109. February 1940.

Sedimentation and Silt

Bell, H.S. Armored mud balls, their origin, properties, and role in sedimentation. Jour. Geol. 48(1):1-31, figs. January-February 1940.

Dobson, G.C. and Johnson, J.W. Studying sediment loads in natural streams. Civ. Engin. 10(2):93-96, figs. February 1940.

"Quantitative measurements of bed load movement, in a natural stream large enough to be representative of rivers in general, are

being made almost daily at the Enoree River Laboratory of the Soil Conservation Service. Of special interest because they are the first of their kind, these observations are but part of a comprehensive research program designed to throw light on various problems of sediment transportation, particularly as related to soil conservation work. Messrs. Dobson and Johnson here describe the laboratory, giving particular attention to the unique control structure from which the bed-load samples are drawn. They also describe the technique of the bed-load observations, and summarize briefly the other phases of the research program."

Snow

Fletcher, E.H. Melting snow as a flood factor in the Sierra Nevada. Amer. Met. Soc. Bul. 21(2):59-63. February 1940.

Florell, V.H. High crop-stubble and snow conservation in the Great Plains region. Soil Conserv. 5(9):223-226. March 1940.

Is your farm too clean? Prairie Farmer 112(5):5, illus. Mar. 9, 1940.
Advocates uncleared fence rows, for in addition to conserving wild life and stopping various kinds of erosion, they also serve as living snow fences that hold the snow on the fields and thus keep the valuable moisture where it is needed most for spring crops.

Plow snow on prairies to conserve moisture. Amer. Nurseryman 71(5):14. Mar. 1, 1940.

Quotes W.R. Leslie who recently described in the newsletter of the Dominion experimental station at Morden, Manitoba, how the Dominion experimental station at Scott, Saskatchewan, has taken bold and timely lead in having the landowner take dominion over his allotments of snow and utilize this natural heritage.

Soil Classification Maps

Striker, M.M. Maps, soils and planning. U.S. Bur. Agr. Econ. Land Policy Rev. 3(1):22-31, figs. January-February 1940.

Advocates the use of a classification map, based on soil types or groups of soil types and their responses to management.

Soil Colloids

Mattson, Sante and Wiklander, Lambert. The laws of soil colloidal behavior: XXI A. The amphoteric points, the pH, and the Donnan equilibrium. Part A. Theoretical. Soil Sci. 49(2):109-134, figs., tables. February 1940.
"References," p. 134.

Soil Conservation

Howard, I.M. New rural patterns. Airlanes 5(1):4-6, 17, 19, 24, illus. January 1940.

The writer, while crossing the country in an airplane, was struck by

the sight of erosion control devices marking the landscape. He terms them "new rural patterns" and explains their value in guarding the acres of American soil.

King, Barrington. Farm planning; a business basis for agriculture. Commonwealth 6(12):13-15. December 1939.

Describes a typical Virginia farm in a soil conservation demonstration area to "see how a 'land inventory' for the purpose of soil conservation is made, how a good land-use program is determined on the basis of physical and economic factors revealed by the inventory, and how a farm is planned to operate as a going concern so as to keep all its soil capital profitably invested and insured against losses brought about by the insidious processes of erosion." The farm described is the Mercer Garnett farm near Charlottesville.

Lowdermilk, W.C. The eleventh commandment. Amer. Forests 46(1):12-15, illus. January 1940.

This article was written in Palestine as the author was completing a fifteen months' study "of man's stewardship of land down through the ages in fifteen countries of the Old World".

As a result of what are termed "the sins of civilization against Mother Earth" he suggests an addition to the Ten Commandments, one which shall regulate man's relation and responsibility to Mother Earth.

Condensed in Conservation 6(1):14-16. Jan/Feb. 1940.

Maits, C.B., jr. Potato pioneers. New England Homestead 112(20):5, 9, illus. Oct. 21, 1939.

"Ten years should see curved farming spread to farms in all corners of the great potato empire of Aroostock, Maine,."

Matson, Howard. Agricultural engineering and farm planning. Soil Conserv. 5(7):167-169, 195, figs. January 1940.

Nichols, M.L. Research problems in conservation engineering. Soil Conserv. 5(7):183-185, 194. January 1940.

Pool, R.J. White man versus the prairie. Science 91(2351):53-58. Jan. 19, 1940.

"Certainly the advantage in the contest of White Man versus the prairie in North America in the past several years has been with those superhuman forces that made and that tend to preserve the prairies inviolate. One of the major problems that now faces man throughout the world is to preserve what is left of his heritage in the soil, and to restore the broken lands that have dogged his footsteps through the forests and across the prairies for centuries."

Wallace, H.A. The war at our feet. Survey Graphic 29(2):109-114, illus. February 1940.

"Through the eyes of the Secretary of Agriculture we catch the gleam of the new land planning - the fight to preserve the basic heritage of our New World, on which every Home depends."

What's your score with the land? Prog.Farmer(Ga.-Ala.-Fla.Ed.)55(3): 7,illus. March 1940.

A score card, developed by the SCS Southeastern regional office, Georgia's extension agronomist, Master Farmer R.E.Lambert, Alabama's SCS coordinator and Florida's extension editor, which will enable every farmer to definitely check his plans for using his land wisely and for conserving its resources.

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"This issue of the C.S.T.A.Review is designed to acquaint agriculturists and other interested parties throughout Canada with the activities of the Prairie Farm Rehabilitation Act, or what is commonly called the P.F.R.A."

Contents: A land utilization plan for prairie agriculture, by E.S. Archibald: pp.4-9. Soil surveys and soil research, by A. Leahy: pp.10-13, 91, map. Economic research in the drought area in western Canada, by J. Coke: pp.14-17, 22, tables. Land utilization in Saskatchewan, by E.E. Eisenhauer: pp.23-25, 95. Manitoba and prairie farm rehabilitation, by J.H. Ellis: pp.26-28, 67. Organization of the P.F.R.A. for water conservation and resettlement, by Geo. Spence and John Vallance: pp.29-31,

57,illus.Agricultural improvement associations,by C.Shirriff:pp.32-34, 42,illus.Organized methods of soil drifting control,by A.E.Palmer:pp. 35-37.Establishment of community pastures and policies of resettlement, by O.Freer and M.Mann:pp.38-42,illus.,diag.Grazing surveys and regrass- ing program,by S.E.Clarke,G.D.Matthews and R.W.Peake:pp.43-48,illus. Water resources for irrigation in western Canada,by B.Russell:pp.49- 57,illus.,tables.Progress of small water development projects,by W.L. Jacobson:pp.58-61,63,84,illus.,map.Irrigation development for resettlement,by W.H.Fairfield and G.N.Denike:pp.64-67,illus.Soil erosion control,by W.Gibson and P.J.Janzon:pp.68-70,illus.Methods of conserving run-off water and controlling soil erosion,by J.S.Parker,Wm.Dickson and E.S.Hopkins:pp.71-73,75-77,illus.Sub-stations and their relation to rehabilitation,by J.C.Moynan and M.J.Tinline:pp.78-84,illus.,table, map.Forage crop expansion,by L.E.Kirk and T.M.Stevenson:pp.85-87,89- 91,illus.Tree planting under the P.F.R.A.,by Norman Ross:pp.93-95, illus.Prairie farm gardens,by W.R.Leslie:pp.97-98,101,illus.

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"Value of plant cover as a major factor controlling stream flow is emphasised by describing the process by which seepage of surface water through soil layers builds up underground reservoirs which maintain perennial springs.Porosity of soil and its capacity to allow seepage depend upon condition of soil profile.Maximum seepage is provided by profile maintained by ecological climax vegetation.What- ever reduces protective value of plant cover interferes directly with the porosity of the soil.In India the chief cause is heavy and uncontrolled grazing.

"Data are quoted for 3 grades of plant cover density in the Pabbi Hills(Punjab)showing the maximum flood intensity which each gives rise to:-(i)land treated by afforestation and active counter-erosion work gives less than 100 cusecs per square mile maximum flood and renders cultivation possible up to the edge of the small stream

channel;(ii)land protected by partial closure to grazing gives 600-700 cusecs per square mile with correspondingly rapid and dangerous flood peaks,rendering cultivation impossible inside a wide flood channel;(iii)unprotected land constantly overgrazed gives a maximum flood intensity of 1,600 cusecs per square mile."

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"The increasing number of popularly-presented conservation books is further increased by the publication of Pandora's Box by Marian E. Baer. Written in simple and straightforward fashion, this book should serve well for use in junior and senior high schools as a text or for collateral reading in social science courses. Miss Baer gives a good general picture of the situation confronting our renewable or organic natural resources today. She is, at times, somewhat superficial, possibly due to the limitations of space. At other times her text reveals a none too broad and penetrating knowledge of the whole conservation picture. It is a complex subject, of course, and many of the points involved in it are controversial. Miss Baer has rather well avoided the latter, but often seems to fail to realize the complexity of the subject and neglects to suggest to the reader the need for further exploration of specific questions. The book is not as logically planned as it might be, the author emphasizing the interrelation of things in the Nature scheme but failing to apply this fact to the book's plan. Although we could wish that Miss Baer's definite abilities to present a subject such as conservation in interesting fashion had been better bulwarked by a grasp of the subject, this book does have its place among conservation texts." Nature Mag. 33(2):65. February 1940.

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Meyer, Konrad, ed. Gefüge und ordnung der deutschen landwirtschaft. (Structure and regulation of German agriculture) 752pp. Berlin, Reichsnährstand-verlags - ges. m.b.h., 1939. 281.175 M572
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Chapter and section titles include: Soil and conservation; Soil uses and cattle; Regulation of life and soil.

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Hart, V.B. Land use in New York. N.Y. Agr. Col. (Cornell) Ext. Bul. 406. 19pp., illus. Ithaca, April 1939. 275.29 M45 no. 406

Kling, H.R. Elevation and land use. Cornell Univ. Col. Agr. Dept. Agr. Econ. and Farm Mangt. A.E. 280. 2 numb. 1., mimeogr. Ithaca, September 1939. 281.9 C81 no. 280

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Engineering practices and crop selection in relation to soil conservation, pp. 10-18.

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